NEW SOURCE CONSTRUCTION PERMIT
and MINOR SOURCE OPERATING PERMIT
OFFICE OF AIR MANAGEMENT

ISK Magnetics, Inc.
4901 Evans Avenue
Valparaiso, Indiana 46383

(herein known as the Permittee) is hereby authorized to construct and operate subject to the conditions contained herein, the emission units described in Section A (Source Summary) of this permit.

This permit is issued to the above mentioned company under the provisions of 326 IAC 2-1.1, 326 IAC 2-5.1, 326 IAC 2-6.1 and 40 CFR 52.780, with conditions listed on the attached pages.

Operation Permit No.: MSOP 127-12157-00050	
Issued by: Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date:

TABLE OF CONTENTS

SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-5.1-3(c)] [326 IAC 2-6.1-4(a)]

The Permittee owns and operates a stationary iron oxide manufacturing plant.

Authorized Individual:	Timothy F. Watrud
Source Address:	4901 Evans Avenue, Valparaiso, Indiana, 46383
Mailing Address:	4901 Evans Avenue, Valparaiso, Indiana, 46383
Phone Number:	219-465-7059
SIC Code:	2816
County Location:	Porter
County Status:	Nonattainment area for ozone Attainment area for all other criteria pollutants
Source Status:	Minor Source Operating Permit Minor Source, under Emission Offset Rules;

A.2 Emissions units and Pollution Control Equipment Summary

This stationary source is approved to construct and operate the following emissions units and pollution control devices:

(a) Two (2) neutralizer tanks, two (2) clear liquor storage tanks, and one (1) hydrochloric acid storage tank, using one (1) scrubber for control;

(b) Four (4) precipitator tanks;

(c) Twenty four (24) storage bins all using filters for control;

(d) Two (2) hammer mills each with one (1) baghouse for control;

(e) Iron Oxide powder production, maximum capacity of 8,300 tons per year;

(1) Two (2) natural gas fired dryers, identified as SS-2 and SS-12, each rated at 3.6 million British thermal units (MMBtu) per hour, and each using a baghouse for control;

(2) Two (2) natural gas fired Calcination kilns, identified as SS-4 and SS-14, each rated at 6.0 MMBtu per hour, and each using a baghouse for control;

(3) Two (2) natural gas fired Reduction kilns, identified as SS-6 and SS-16, each rated at 2.0 MMBtu per hour, each with a flare rated at 0.05 MMBtu per hour, and each using a baghouse for control;

(4) One (1) natural gas fired H2 Reduction kiln rated at 0.5 MMBtu per hour, identified as SS-19, using a scrubber for control;

(5) Two (2) natural gas fired Oxidation kilns, identified as SS-8 and SS-18, each rated at 1.6 MMBtu per hour, and each using a baghouse for control;

(f) Two (2) Chasing operations with one baghouse for control;

(g) One (1) natural gas fired Boiler (#1), rated at 13.39 MMBtu per hour, identified as SS-10;

(h) One (1) natural gas fired Boiler (#2), rated at 12.56 MMBtu per hour, identified as SS-11;

(i) One (1) natural gas fired Boiler (#3), rated at 9.0 MMBtu per hour, identified as SS-21.

(j) One (1) diesel emergency generator, with a power output of 700 horse power;

(k) One (1) diesel emergency fire pump, with a power output of 136 horse power;

(l) Two (2) day tanks containing diesel fuel, each with a maximum capacity of 275 gallons, and each with an annual throughput of 10,000 gallons per year. (Note: these storage tanks have negligible emissions).

SECTION B GENERAL CONSTRUCTION CONDITIONS

THIS SECTION OF THE PERMIT IS BEING ISSUED UNDER THE PROVISIONS OF 326 IAC 2-1.1 AND 40 CFR 52.780, WITH CONDITIONS LISTED BELOW.

B.1 Permit No Defense [IC 13]

This permit to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

B.2 Definitions

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, any applicable definitions found in IC 13-11, 326 IAC 1-2, and 326 IAC 2-1.1-1 shall prevail.

B.3 Effective Date of the Permit [IC13-15-5-3]

Pursuant to IC 13-15-5-3, this permit becomes effective upon its issuance.

B.4 Revocation of Permits [326 IAC 2-1.1-9(5)]

Pursuant to 326 IAC 2-1.1-9(5)(Revocation of Permits), the Commissioner may revoke this permit if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

B.5 Modification to Permit [326 IAC 2]

Notwithstanding the Section B condition entitled “Minor Source Operating Permit”, all requirements and conditions of this construction permit shall remain in effect unless modified in a manner consistent with procedures established for modifications of construction permits pursuant to 326 IAC 2 (Permit Review Rules).

B.6 Minor Source Operating Permit [326 IAC 2-6.1]

This document shall also become a minor source operating permit pursuant to 326 IAC 2-6.1 when, prior to start of operation, the following requirements are met:

(a) The attached Affidavit of Construction shall be submitted to the Office of Air Management (OAM), Permit Administration & Development Section.

(1) If the Affidavit of Construction verifies that the facilities covered in this Construction Permit were constructed as proposed in the application, then the facilities may begin operating on the date the Affidavit of Construction is postmarked or hand delivered to IDEM.

(2) If the Affidavit of Construction does not verify that the facilities covered in this Construction Permit were constructed as proposed in the application, then the Permittee shall receive an Operation Permit Validation Letter from the Chief of the Permit Administration & Development Section prior to beginning operation of the facilities.

(b) If construction is completed in phases; i.e., the entire construction is not done continuously, a separate affidavit must be submitted for each phase of construction. Any permit conditions associated with operation start up dates such as stack testing for New Source Performance Standards (NSPS) shall be applicable to each individual phase.

(c) Upon receipt of the Operation Permit Validation Letter from the Chief of the Permit Administration & Development Section, the Permittee shall attach it to this document.

(d) The operation permit will be subject to annual operating permit fees pursuant to 326 IAC 2-1.1-7(Fees).

(e) Pursuant to 326 IAC 2-6.1-7, the Permittee shall apply for an operation permit renewal at least ninety (90) days prior to the expiration date established in the validation letter. If IDEM, OAM, upon receiving a timely and complete permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect until the renewal permit has been issued or denied. The operation permit issued shall contain as a minimum the conditions in Section C and Section D of this permit.

SECTION C **SOURCE OPERATION CONDITIONS**

Entire Source

C.1 Emission Offset Minor Source Status [326 IAC 2-3]

(a) The total source potential to emit NO_X is limited to less than 25 tons per year. Therefore, the requirements of 326 IAC 2-3 (Emission Offset) will not apply.

(b) Any change or modification which may increase potential to emit of NO_X to 25 tons per year, from the equipment covered in this permit, shall require an Emission Offset pursuant to 326 IAC 2-3, before such change may occur.

(c) Any change or modification which may increase potential to emit of VOC to 25 tons per year, 10 tons per year of any single hazardous air pollutant, twenty-five tons per year of any combination of hazardous air pollutants, or 100 tons per year of any other regulated pollutant from this source, shall cause this source to be considered a major source under Part 70 Permit Program, 326 IAC 2-7, and shall require approval from IDEM, OAM prior to making the change.

C.2 Preventive Maintenance Plan [326 IAC 1-6-3]

(a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMP) after issuance of this permit, including the following information on each emissions unit:

(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions;

(3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

(b) The Permittee shall implement the Preventive Maintenance Plans as necessary to ensure that failure to implement the Preventive Maintenance Plan does not cause or contribute to a violation of any limitation on emissions or potential to emit.

(c) PMP's shall be submitted to IDEM, OAM, upon request and shall be subject to review and approval by IDEM, OAM. IDEM, OAM, may require the Permittee to revise its Preventive Maintenance Plan whenever lack of proper maintenance causes or contributes to any violation.

C.3 Permit Revision [326 IAC 2-5.1-3(e)(3)] [326 IAC 2-6.1-6]

(a) The Permittee must comply with the requirements of 326 IAC 2-6.1-6 whenever the Permittee seeks to amend or modify this permit.

(b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

Any such application should be certified by the "authorized individual" as defined by 326 IAC 2-1.1-1.

(c) The Permittee shall notify the OAM within thirty (30) calendar days of implementing a notice-only change. [326 IAC 2-6.1-6(d)]

C.4 Inspection and Entry [326 IAC 2-7-6(2)]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAM, U.S. EPA, or an authorized representative to perform the following:

(a) Enter upon the Permittee's premises where a permitted source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;

(b) Have access to and copy, at reasonable times, any records that must be kept under this title or the conditions of this permit or any operating permit revisions;

(c) Inspect, at reasonable times, any processes, emissions units (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit or any operating permit revisions;

(d) Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and

(e) Utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

C.5 Transfer of Ownership or Operation [326 IAC 2-6.1-6(d)(3)]

Pursuant to [326 IAC 2-6.1-6(d)(3)] :

(a) In the event that ownership of this source is changed, the Permittee shall notify IDEM, OAM, Permits Branch within thirty (30) days of the change.

(b) The written notification shall be sufficient to transfer the permit to the new owner by an notice-only change pursuant to 326 IAC 2-6.1-6(d)(3).

(c) IDEM, OAM, shall issue a revised permit.

The notification which shall be submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1.

C.6 Permit Revocation [326 IAC 2-1-9]

Pursuant to 326 IAC 2-1-9(a)(Revocation of Permits), this permit to construct and operate may be revoked for any of the following causes:

(a) Violation of any conditions of this permit.

(b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this permit.

(c) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this permit shall not require revocation of this permit.

(d) Noncompliance with orders issued pursuant to 326 IAC 1-5 (Episode Alert Levels) to reduce emissions during an air pollution episode.

(e) For any cause which establishes in the judgment of IDEM, the fact that continuance of this permit is not consistent with purposes of this article.

C.7 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor in a six (6) hour period.

C.8 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.

Testing Requirements

C.9 Performance Testing [326 IAC 3-6][326 IAC 2-1.1-11]

(a) Compliance testing on new emissions units shall be conducted within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up, if specified in Section D of this approval. All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAM.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

no later than thirty-five (35) days prior to the intended test date. The Permittee shall submit a notice of the actual test date to the above address so that it is received at least two weeks prior to the test date.

(b) All test reports must be received by IDEM, OAM within forty-five (45) days after the completion of the testing. An extension may be granted by the IDEM, OAM, if the source submits to IDEM, OAM, a reasonable written explanation within five (5) days prior to the end of the initial forty-five (45) day period.

The documentation submitted by the Permittee does not require certification by the "authorized individual" as defined by 326 IAC 2-1.1-1.

Compliance Monitoring Requirements

C.10 Compliance Monitoring [326 IAC 2-1.1-11]

Compliance with applicable requirements shall be documented as required by this permit. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. All monitoring and record keeping requirements not already legally required shall be implemented when operation begins.

C.11 Monitoring Methods [326 IAC 3]

Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, or other approved methods as specified in this permit.

C.12 Compliance Monitoring Plan - Failure to Take Response Steps [326 IAC 1-6]

(a) The Permittee is required to implement a compliance monitoring plan to ensure that reasonable information is available to evaluate its continuous compliance with applicable requirements. This compliance monitoring plan is comprised of:

(1) This condition;

(2) The Compliance Determination Requirements in Section D of this permit;

(3) The Compliance Monitoring Requirements in Section D of this permit;

(4) The Record Keeping and Reporting Requirements in Section C (Monitoring Data Availability, General Record Keeping Requirements, and General Reporting Requirements) and in Section D of this permit; and

(5) A Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. CRP's shall be submitted to IDEM, OAM upon request and shall be subject to review and approval by IDEM, OAM. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee and maintained on site, and is comprised of :

(A) Response steps that will be implemented in the event that compliance related information indicates that a response step is needed pursuant to the requirements of Section D of this permit; and

(B) A time schedule for taking such response steps including a schedule for devising additional response steps for situations that may not have been predicted.

(b) For each compliance monitoring condition of this permit, appropriate response steps shall be taken when indicated by the provisions of that compliance monitoring condition. Failure to perform the actions detailed in the compliance monitoring conditions or failure to take the response steps within the time prescribed in the Compliance Response Plan, shall constitute a violation of the permit unless taking the response steps set forth in the Compliance Response Plan would be unreasonable.

(c) After investigating the reason for the excursion, the Permittee is excused from taking further response steps for any of the following reasons:

(1) The monitoring equipment malfunctioned, giving a false reading. This shall be an excuse from taking further response steps providing that prompt action was taken to correct the monitoring equipment.

(2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for an administrative amendment to the permit, and such request has not been denied or;

(3) An automatic measurement was taken when the process was not operating; or

(4) The process has already returned to operating within “normal” parameters and no response steps are required.

(d) Records shall be kept of all instances in which the compliance related information was not met and of all response steps taken.

C.13 Actions Related to Noncompliance Demonstrated by a Stack Test

(a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate corrective actions. The Permittee shall submit a description of these corrective actions to IDEM, OAM, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize emissions from the affected emissions unit while the corrective actions are being implemented. IDEM, OAM shall notify the Permittee within thirty (30) days, if the corrective actions taken are deficient. The Permittee shall submit a description of additional corrective actions taken to IDEM, OAM within thirty (30) days of receipt of the notice of deficiency. IDEM, OAM reserves the authority to use enforcement activities to resolve noncompliant stack tests.

(b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAM that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAM may extend the retesting deadline. Failure of the second test to demonstrate compliance with the appropriate permit conditions may be grounds for immediate revocation of the permit to operate the affected emissions unit.

The documents submitted pursuant to this condition do not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1.

Record Keeping and Reporting Requirements

C.14 Malfunctions Report [326 IAC 1-6-2]

Pursuant to 326 IAC 1-6-2 (Records; Notice of Malfunction):

(a) A record of all malfunctions, including startups or shutdowns of any facility or emission control equipment, which result in violations of applicable air pollution control regulations or applicable emission limitations shall be kept and retained for a period of three (3) years and shall be made available to the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM) or appointed representative upon request.

(b) When a malfunction of any facility or emission control equipment occurs which lasts more than one (1) hour, said condition shall be reported to OAM, using the Malfunction Report Forms (2 pages). Notification shall be made by telephone or facsimile, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence.

(c) Failure to report a malfunction of any emission control equipment shall constitute a violation of 326 IAC 1-6, and any other applicable rules. Information of the scope and expected duration of the malfunction shall be provided, including the items specified in 326 IAC 1-6-2(a)(1) through (6).

(d) Malfunction is defined as any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. [326 IAC 1-2-39]

C.15 Annual Emission Statement [326 IAC 2-6]

(a) The Permittee shall submit an annual emission statement certified pursuant to the requirements of 326 IAC 2-6, that must be received by April 15 of each year and must comply with the minimum requirements specified in 326 IAC 2-6-4. The annual emission statement shall meet the following requirements:

(1) Indicate actual emissions of criteria pollutants from the source, in compliance with 326 IAC 2-6 (Emission Reporting);

(2) Indicate actual emissions of other regulated pollutants from the source, for purposes of Part 70 fee assessment.

(b) The annual emission statement covers the twelve (12) consecutive month time period starting December 1 and ending November 30. The annual emission statement must be submitted to:

Indiana Department of Environmental Management
Technical Support and Modeling Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

(c) The annual emission statement required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAM, on or before the date it is due.

The submittal by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1.

C.16 Monitoring Data Availability [326 IAC 2-6.1-2] [IC 13-14-1-13]

(a) With the exception of performance tests conducted in accordance with Section C-Performance Testing, all observations, sampling, maintenance procedures, and record keeping, required as a condition of this permit shall be performed at all times the equipment is operating at normal representative conditions.

(b) As an alternative to the observations, sampling, maintenance procedures, and record keeping of subsection (a) above, when the equipment listed in Section D of this permit is not operating, the Permittee shall either record the fact that the equipment is shut down or perform the observations, sampling, maintenance procedures, and record keeping that would otherwise be required by this permit.

(c) If the equipment is operating but abnormal conditions prevail, additional observations and sampling should be taken with a record made of the nature of the abnormality.

(d) If for reasons beyond its control, the operator fails to make required observations, sampling, maintenance procedures, or record keeping, reasons for this must be recorded.

(e) At its discretion, IDEM may excuse such failure providing adequate justification is documented and such failures do not exceed five percent (5%) of the operating time in any quarter.

(f) Temporary, unscheduled unavailability of staff qualified to perform the required observations, sampling, maintenance procedures, or record keeping shall be considered a valid reason for failure to perform the requirements stated in (a) above.

C.17 General Record Keeping Requirements [326 IAC 2-6.1-2]

(a) Records of all required monitoring data and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location for a minimum of three (3) years and available upon the request of an IDEM, OAM, representative. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a written request for records to the Permittee, the Permittee shall furnish the records within a reasonable time.

(b) Records of required monitoring information shall include, where applicable:

(1) The date, place, and time of sampling or measurements;

(2) The dates analyses were performed;

(3) The company or entity performing the analyses;

(4) The analytic techniques or methods used;

(5) The results of such analyses; and

(6) The operating conditions existing at the time of sampling or measurement.

(c) Support information shall include, where applicable:

(1) Copies of all reports required by this permit;

(2) All original strip chart recordings for continuous monitoring instrumentation;

(3) All calibration and maintenance records;

(4) Records of preventive maintenance shall be sufficient to demonstrate that failure to implement the Preventive Maintenance Plan did not cause or contribute to a violation of any limitation on emissions or potential to emit. To be relied upon subsequent to any such violation, these records may include, but are not limited to: work orders, parts inventories, and operator's standard operating procedures. Records of response steps taken shall indicate whether the response steps were performed in accordance with the Compliance Response Plan required by Section C - Compliance Monitoring Plan - Failure to take Response Steps, of this permit, and whether a deviation from a permit condition was reported. All records shall briefly describe what maintenance and response steps were taken and indicate who performed the tasks.

(d) All record keeping requirements not already legally required shall be implemented when operation begins.

C.18 General Reporting Requirements [326 IAC 2-1.1-11] [326 IAC 2-6.1-2] [IC 13-14-1-13]

(a) To affirm that the source has met all the compliance monitoring requirements stated in this permit the source shall submit a Quarterly Compliance Monitoring Report. Any deviation from the requirements and the date(s) of each deviation must be reported. The Compliance Monitoring Report shall include the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

(c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAM, on or before the date it is due.

(d) Unless otherwise specified in this permit, any quarterly report shall be submitted within thirty (30) days of the end of the reporting period. The report does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(e) All instances of deviations must be clearly identified in such reports. A reportable deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit or a rule. It does not include:

(1) An excursion from compliance monitoring parameters as identified in Section D of this permit unless tied to an applicable rule or limit; or

(2) A malfunction as described in 326 IAC 1-6-2; or

(3) Failure to implement elements of the Preventive Maintenance Plan unless lack of maintenance has caused or contributed to a deviation.

(4) Failure to make or record information required by the compliance monitoring provisions of Section D unless such failure exceeds 5% of the required data in any calendar quarter.

A Permittee's failure to take the appropriate response step when an excursion of a compliance monitoring parameter has occurred or failure to monitor or record the required compliance monitoring is a deviation.

(f) Any corrective actions or response steps taken as a result of each deviation must be clearly identified in such reports.

(g) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period.

C.19 Annual Notification [326 IAC 2-6.1-5(a)(5)]

(a) Annual notification shall be submitted to the Office of Air Management stating whether or not the source is in operation and in compliance with the terms and conditions contained in this permit.

(b) Noncompliance with any condition must be specifically identified. If there are any permit conditions or requirements for which the source is not in compliance at any time during the year, the Permittee must provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be, achieved. The notification must be signed by an authorized individual.

(c) The annual notice shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in the format attached no later than March 1 of each year to:

Compliance Data Section, Office of Air Management
Indiana Department of Environmental Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, IN 46206-6015

(d) The notification shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAM, on or before the date it is due.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description
(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

(a) Two (2) neutralizer tanks, two (2) clear liquor storage tanks, and one (1) hydrochloric acid storage tank; using one (1) scrubber for control;
(b) Four (4) precipitator tanks;
(c) Twenty four (24) storage bins all using filters for control;
(d) Two (2) hammer mills, each with one (1) baghouse for control;
(e) Iron Oxide powder production, maximum capacity of 8,300 tons per year;
  (1) Two (2) natural gas fired dryers, identified as SS-2 and SS-12, each rated at 3.6 million British thermal units (MMBtu) per hour, and each using a baghouse for control;
  (2) Two (2) natural gas fired Calcination kilns, identified as SS-4 and SS-14, each rated at 6.0 MMBtu per hour, and each using a baghouse for control;
  (3) Two (2) natural gas fired Reduction kilns, identified as SS-6 and SS-16, each rated at 2.0 MMBtu per hour, each with a flare rated at 0.05 MMBtu per hour, and each using a baghouse for control;
  (4) One (1) natural gas fired H2 Reduction kiln rated at 0.5 MMBtu per hour, identified as SS-19, using a scrubber for control;
  (5) Two (2) natural gas fired Oxidation kilns, identified as SS-8 and SS-18, each rated at 1.6 MMBtu per hour, and each using a baghouse for control;
(f) Two (2) Chasing operations with one baghouse for control;
(g) One (1) natural gas fired Boiler (#1), rated at 13.39 MMBtu per hour, identified as SS-10;
(h) One (1) natural gas fired Boiler (#2), rated at 12.56 MMBtu per hour, identified as SS-11;
(i) One (1) natural gas fired Boiler (#3), rated at 9.0 MMBtu per hour, identified as SS-21.
(j) One (1) diesel emergency generator, with a power output of 700 horse power;
(k) One (1) diesel emergency fire pump, with a power output of 136 horse power;
(l) Two (2) day tanks containing diesel fuel, each with a maximum capacity of 275 gallons, and each with an annual throughput of 10,000 gallons per year. (Note: these storage tanks have negligible emissions).

Emission Limitations and Standards

D.1.1 Emission Offset Minor Limit [326 IAC 2-3]

The input of natural gas to the natural gas combustion units shall be limited to 380 MMCF per twelve (12) consecutive month period. This usage limit is required to limit the potential to emit NO_X to less than 25 tons per twelve (12) consecutive month period. Compliance with this limit makes 326 IAC 2-3 (Emission Offset) not applicable.

D.1.2 Particulate Matter (PM) [326 IAC 6-3-2(c)]

Pursuant to 326 IAC 6-3-2(c) the PM from the manufacturing of iron oxide shall not exceed the pound per hour emission rate established as E in the following formula:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour and P = process weight rate in tons per hour

$E = 4.10\ (0.947)^{0.67} = 3.95$ lbs PM/hr

Based on the above equation, particulate matter emissions from the manufacturing of iron oxide shall be limited to 3.95 pounds per hour.

D.1.3 Particulate Matter (PM) [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating), particulate matter (PM) from the three (3) natural gas-fired boilers (ID Nos. 1, 2 and 3) shall not exceed 0.432 pounds per million Btu heat input.

Compliance Determination Requirements

D.1.4 Testing Requirements [326 IAC 2-1.1-11]

The Permittee is not required to test this emissions unit by this permit. However, IDEM may require compliance testing when necessary to determine if the emissions unit is in compliance. If testing is required by IDEM, compliance with the NO_X limit specified in Condition D.1.1 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

D.1.5 Particulate Matter (PM)

The dust collectors, scrubbers and baghouses for PM control shall be in operation at all times the kilns, dryers, and hammer mills are in use.

Record Keeping and Reporting Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

D.1.6 Record Keeping Requirements

(a) To document compliance with Condition D.1.1, the Permittee shall maintain records in accordance with (1) through (2) below. Records maintained for (1) through (2) shall be taken monthly and shall be complete and sufficient to establish compliance with the natural gas usage limits established in Condition D.1.1.

(1) The amount of natural gas input to the natural gas combustion units.

(2) A log of the dates of use.

(b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.7 Reporting Requirements

The reports required in this section shall be submitted to IDEM, OAM using the address specified in Section C - General Reporting Requirements.

(a) A quarterly summary of the information to document compliance with Condition D.1.1, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.

(b) Pursuant to 326 IAC 8-9-6, Record Keeping and Reporting requirements for VOC Storage Vessels, the owner or operator of each vessel shall maintain a record and submit a report with the following information for each vessel:

(1) The vessel identification number;
(2) The vessel dimensions; and
(3) The vessel capacity.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION

MINOR SOURCE OPERATING PERMIT
ANNUAL NOTIFICATION

This form should be used to comply with the notification requirements under 326 IAC 2-6.1-5(a)(5).

Company Name:	**ISK Magnetics, Inc.**
Address:	**4901 Evans Avenue**
City:	**Valparaiso**
Phone #:	**219-465-7050**
MSOP #:	**127-12157-00050**

I hereby certify that ISK Magnetics, Inc. is
9 still in operation.
9 no longer in operation.

I hereby certify that ISK Magnetics, Inc. is
9 in compliance with the requirements of MSOP.127-12157-00050
9 not in compliance with the requirements of MSOP 127-12157-00050

Authorized Individual (typed):
Title:
Signature:
Date:

If there are any conditions or requirements for which the source is not in compliance, provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be achieved.

Noncompliance:

Indiana Department of Environmental Management
Office of Air Management
Compliance Data Section

Quarterly Report

Company Name: ISK Magnetics, Inc.
Location: 4901 Evans Avenue, Valparaiso, IN 46383
Permit No.: 127-12157-00050
Source: 127-00050
Pollutant: NOX
Limit: The input of natural gas to the natural gas combustion units shall be limited to 380 MMCF per twelve (12) consecutive month period, rolled on a monthly basis.

Year: _____

Month	Column 1	Column 2	Column 1 + Column 2
	Fuel Usage This month (MMCF)	Fuel Usage Previous 11 Months (MMCF)	12 Month Fuel Usage (MMCF)
Month 1			
Month 2			
Month 3			

Submitted by: _____

Title/Position: _____

Signature: _____

Date: _____

MALFUNCTION REPORT

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
FAX NUMBER - 317 233-5967

This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6 and to qualify for the exemption under 326 IAC 1-6-4.

THIS FACILITY MEETS THE APPLICABILITY REQUIREMENTS BECAUSE IT HAS POTENTIAL TO EMIT 25 TONS/YEAR PARTICULATE MATTER ?_____, 25 TONS/YEAR SULFUR DIOXIDE ?_____, 25 TONS/YEAR NITROGEN OXIDES?_____, 25 TONS/YEAR VOC ?_____, 25 TONS/YEAR HYDROGEN SULFIDE ?_____, 25 TONS/YEAR TOTAL REDUCED SULFUR ?_____, 25 TONS/YEAR REDUCED SULFUR COMPOUNDS ?_____, 25 TONS/YEAR FLUORIDES ?_____, 100TONS/YEAR CARBON MONOXIDE ?_____, 10 TONS/YEAR ANY SINGLE HAZARDOUS AIR POLLUTANT ?_____, 25 TONS/YEAR ANY COMBINATION HAZARDOUS AIR POLLUTANT ?_____, 1 TON/YEAR LEAD OR LEAD COMPOUNDS MEASURED AS ELEMENTAL LEAD ?_____, OR IS A SOURCE LISTED UNDER 326 IAC 2-5.1-3(2) ?_____. EMISSIONS FROM MALFUNCTIONING CONTROL EQUIPMENT OR PROCESS EQUIPMENT CAUSED EMISSIONS IN EXCESS OF APPLICABLE LIMITATION _____.
THIS MALFUNCTION RESULTED IN A VIOLATION OF: 326 IAC _____ OR, PERMIT CONDITION # _____ AND/OR PERMIT LIMIT OF _____
THIS INCIDENT MEETS THE DEFINITION OF 'MALFUNCTION' AS LISTED ON REVERSE SIDE ? Y N
THIS MALFUNCTION IS OR WILL BE LONGER THAN THE ONE (1) HOUR REPORTING REQUIREMENT ? Y N

COMPANY: ISK Magnetics, Inc .PHONE NO. (219) 464-7395
LOCATION: Valparaiso, Porter County
PERMIT NO. 127-12157-00050 AFS PLANT ID: 127-00050 AFS POINT ID: INSP: Dave Sampias
CONTROL/PROCESS DEVICE WHICH MALFUNCTIONED AND REASON:_____
_____

DATE/TIME MALFUNCTION STARTED: _____/_____/ 20____ _____ AM / PM

ESTIMATED HOURS OF OPERATION WITH MALFUNCTION CONDITION:_____

DATE/TIME CONTROL EQUIPMENT BACK-IN SERVICE_____/_____/ 19____ _____ AM/PM

TYPE OF POLLUTANTS EMITTED: TSP, PM-10, SO2, VOC, OTHER:_____

ESTIMATED AMOUNT OF POLLUTANT EMITTED DURING MALFUNCTION: _____

_____

MEASURES TAKEN TO MINIMIZE EMISSIONS:_____

_____
REASONS WHY FACILITY CANNOT BE SHUTDOWN DURING REPAIRS:

CONTINUED OPERATION REQUIRED TO PROVIDE ESSENTIAL* SERVICES:_____
CONTINUED OPERATION NECESSARY TO PREVENT INJURY TO PERSONS:_____
CONTINUED OPERATION NECESSARY TO PREVENT SEVERE DAMAGE TO EQUIPMENT:_____
INTERIM CONTROL MEASURES: (IF APPLICABLE)_____
_____
_____

MALFUNCTION REPORTED BY:_____TITLE:_____
(SIGNATURE IF FAXED)

MALFUNCTION RECORDED BY:_____DATE:_____TIME:_____
*SEE PAGE 2

Please note - This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6 and to qualify for the exemption under 326 IAC 1-6-4.

326 IAC 1-6-1 Applicability of rule

Sec. 1. This rule applies to the owner or operator of any facility required to obtain a permit under 326 IAC 2-5.1 or 326 IAC 2-6.1.

326 IAC 1-2-39 "Malfunction" definition

Sec. 39. Any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner.

***Essential services** are interpreted to mean those operations, such as, the providing of electricity by power plants. Continued operation solely for the economic benefit of the owner or operator shall not be sufficient reason why a facility cannot be shutdown during a control equipment shutdown.

If this item is checked on the front, please explain rationale:

_____
_____

Indiana Department of Environmental Management
Office of Air Management

Addendum to the
Technical Support Document for Minor Source Operating Permit (MSOP)

Source Name: **ISK Magnetics, Inc.**
Source Location: **4901 Evans Avenue, Valparaiso, Indiana 46383**
SIC Code: **2816**
County: **Porter**
Operation Permit No.: **MSOP 127-12157-00050**
Permit Reviewer: **Linda Quigley/EVP**

On July 14, 2000, the Office of Air Management (OAM) had a notice published in the Vidette Times, Munster Indiana and Chesterton Tribune in Chesterton, Indiana, stating that ISK Magnetics, Inc. had applied for a Minor Source Operating Permit (MSOP) to consolidate existing registrations and exemptions and to construct and operate an emergency generator, fire pump, and two (2) VOC storage tanks. The notice also stated that OAM proposed to issue a MSOP for this operation and provided information on how the public could review the proposed MSOP and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this MSOP should be issued as proposed.

On August 15, 2000, DeRolf Environmental Consulting Agency, Inc. submitted comments on behalf of ISK Magnetics, Inc. The summary of the comments and corresponding responses is as follows (bolded language has been added, the language with a line through it has been deleted):

Comment # 1

Comment to D.1.6(a)(1)(B) - Please remove (B), Cleaning cycle frequency. It is redundant and of little value to require both (A) and (B).

Response # 1

Condition D.1.6 - Record Keeping Requirements, conditions relating to Compliance Monitoring Requirements for the baghouses will be deleted. Compliance Monitoring is not required for the baghouses since the allowable emissions for the controlled pollutant are relatively low. However, record keeping to show compliance with the requirements of Condition D.1.1 is necessary. Therefore, Condition D.1.6 has been revised as follows:

Record Keeping and Reporting Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

D.1.6 Record Keeping Requirements

(a) To document compliance with Condition D.1.5**1**, the Permittee shall maintain ~~the following:~~ **records in accordance with (1) through (2) below. Records maintained for (1) through (2) shall be taken monthly and shall be complete and sufficient to establish compliance with the natural gas usage limits established in Condition D.1.1.**

~~(1) Weekly records of the following operational parameters during normal operation when venting to the atmosphere:~~

~~(A) Inlet and outlet differential static pressure; and~~

~~(B) Cleaning cycle: frequency and differential pressure~~

~~(2) Documentation of all response steps implemented, per event;~~

~~(3) Operation and preventive maintenance logs, including work purchases orders, shall be maintained;~~

~~(4) Quality Assurance/Quality Control (QA/QC) procedures;~~

~~(5) Operator standard operating procedures (SOP)~~

~~(6) Manufacturer's specifications or its equivalent;~~

~~(7) Equipment "troubleshooting" contingency plan;~~

~~(8) Documentation of the dates vents are redirected.~~

(1) The amount of natural gas input to the natural gas combustion units.

(2) A log of the dates of use.

(b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

In addition, Condition D.1.5 - Particulate Matter (PM) will be revised as follows:

D.1.5 Particulate Matter (PM)

~~Pursuant to CP 127-2893-00050, issued on April 6, 1993,~~ **T**he dust collectors, scrubbers and baghouses for PM control shall be in operation at all times the kilns, dryers, and hammer mills are in use.

This condition is not listed in CP 127-2893-00050, however it is required to comply with Condition D.1.2 - Particulate Matter, [326 IAC 6-3-2(c)].

Comment # 2

Comment to D.1.7(1) - We request that the company be allowed to report semiannually rather than quarterly because actual natural gas usage has historically been less than 25% percent of the limit set and this condition places undo hardship on the limited staff.

Response # 2

The source locates in an ozone severe non-attainment area and shall limit natural gas usages to avoid the requirements of 326 IAC 2-3 (Emission Offset). The Office of Air Management feels that if reporting was only submitted semi-annually, the possibility for exceeding natural gas usage limit would not be detected soon enough and would lead to a deviation from the permit requirements. There will be no changes to this condition in the final permit due to this comment.

Indiana Department of Environmental Management
Office of Air Management

Technical Support Document (TSD) for a New Source Construction and Minor Source Operating Permit

Source Background and Description

Source Name:	**ISK Magnetics, Inc.**
Source Location:	**4901 Evans Avenue, Valparaiso, IN 46383**
County:	**Porter**
SIC Code:	**2816**
Operation Permit No.:	**127-12157-00050**
Permit Reviewer:	**Linda Quigley/EVP**

The Office of Air Management (OAM) has reviewed an application from ISK Magnetics, Inc. relating to the consolidation of existing registrations into a MSOP and construction and operation of an emergency generator, fire pump and fuel tanks.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units and pollution control devices:

(a) Two (2) neutralizer tanks, two (2) clear liquor storage tanks, and one (1) hydrochloric acid storage tank, using one (1) scrubber for control;

(b) Four (4) precipitator tanks;

(c) Twenty four (24) storage bins all using filters for control;

(d) Two (2) hammer mills each with one (1) baghouse for control;

(e) Iron Oxide powder production, maximum capacity of 8,300 tons per year;

(1) Two (2) natural gas fired dryers, identified as SS-2 and SS-12, each rated at 3.6 million British thermal units (MMBtu) per hour, and each using a baghouse for control;

(2) Two (2) natural gas fired Calcination kilns, identified as SS-4 and SS-14, each rated at 6.0 MMBtu per hour, and each using a baghouse for control;

(3) Two (2) natural gas fired Reduction kilns, identified as SS-6 and SS-16, each rated at 2.0 MMBtu per hour, each with a flare rated at 0.05 MMBtu per hour, and each using a baghouse for control;

(4) One (1) natural gas fired H2 Reduction kiln rated at 0.5 MMBtu per hour, identified as SS-19, using a scrubber for control;

(5) Two (2) natural gas fired Oxidation kilns, identified as SS-8 and SS-18, each rated at 1.6 MMBtu per hour, and each using a baghouse for control;

(f) Two (2) Chasing operations with one baghouse for control;

(g) One (1) natural gas fired Boiler (#1), rated at 13.39 MMBtu per hour, identified as SS-10;

(h) One (1) natural gas fired Boiler (#2), rated at 12.56 MMBtu per hour, identified as SS-11;

(i) One (1) natural gas fired Boiler (#3), rated at 9.0 MMBtu per hour, identified as SS-21.

(j) One (1) diesel emergency generator, with a power output of 700 horse power;

(k) One (1) diesel emergency fire pump, with a power output of 136 horse power;

(l) Two (2) day tanks containing diesel fuel, each with a maximum capacity of 275 gallons, and each with an annual throughput of 10,000 gallons per year. (Note: these storage tanks have negligible emissions).

Note: Items (j), (k) and (l) are new construction.

Existing Approvals

The source has been operating under previous approvals including, but not limited to, the following:

(a) Exempt CP 127-3070, Plant ID 127-00050, issued on October 27, 1993; and

(b) Registration CP 127-2893, Plant ID 127-00050, issued on April 6, 1993;

All conditions from previous approvals were incorporated into this permit.

Enforcement Issue

There are no enforcement actions pending.

Recommendation

The staff recommends to the Commissioner that the construction and operation be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on April 11, 2000. Additional information was received on June 16, 2000.

Emission Calculations

See Appendix A of this document for detailed emissions calculations (pages 1 - 7).

Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency."

Pollutant	Potential To Emit (tons/year)
PM	29.29
PM-10	30.77
SO_2	0.34
VOC	1.71
CO	23.99
NO_x	32.35

HAP's	Potential To Emit (tons/year)
Benzene	less than 10
Toluene	less than 10
Xylene	less than 10
Hexane	less than 10
Dichlorobenzene	less than 10
1,3 Butadiene	less than 10
Formaldehyde	less than 10
Acetaldehyde	less than 10
Acrolein	less than 10
Total PAH	less than 10
Lead	less than 10
Cadmium	less than 10
Nickel	less than 10
Chromium	less than 10
Manganese	less than 10
TOTAL	less than 25

(a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of PM, PM10 and NO_X is equal to or greater than 25 tons per year. Therefore, pursuant to 326 IAC 2-5.1-3, Section (a)(1), and 326 IAC 2-6.1-2, a construction and operating permit is required.

Actual Emissions

No previous emission data has been received from the source.

Limited Potential to Emit

The table below summarizes the total potential to emit, reflecting all limits, of the significant emission units.

	Limited Potential to Emit (tons/year)						
Process/facility	PM	PM-10	SO_2	VOC	CO	NO_X	HAPs
Existing facility	0.69	1.69	0.10	1.00	16.00	19.00	0.0
New facility	0.19	0.07	0.14	0.21	1.19	5.25	0.0
Total Emissions	0.88	1.76	0.24	1.21	17.19	24.25	0.0

Note: NO_X emissions will be limited to less than 25 tons per year therefore making the provisions of IAC 326 2-3-3 (Emissions Offset) not applicable.

County Attainment Status

The source is located in Porter County.

Pollutant	Status
PM-10	attainment/unclassifiable
SO_2	attainment/unclassifiable
NO_2	attainment/unclassifiable
Ozone	severe non-attainment
CO	attainment/unclassifiable
Lead	attainment/unclassifiable

(a) Volatile organic compounds (VOC) and oxides of nitrogen are precursors for the formation of ozone. Therefore, VOC and NOx emissions are considered when evaluating the rule applicability relating to the ozone standards. Porter County has been designated as severe non-attainment for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This existing source, including the emissions from this permit MSOP 127-12157-00050, is still not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

(a) PM, PM_{10}, SO_2, NO_X and CO are less than 100 tons per year;
(b) VOC is less than 25 tons per year;
(c) a single hazardous air pollutant (HAP) is less than 10 tons per year; and
(d) any combination of HAPs is less than 25 tons/year.

This status is based on all the air approvals issued to the source.

Federal Rule Applicability

(a) The two (2) diesel fuel storage tanks are not subject to the requirements of the New Source Performance Standard, 326 IAC 12, (40 CFR 60.110b, Subpart Kb), because each tank has a capacity less than forty (40) cubic meters.

(b) The one (1) natural gas fired boiler, (ID No. 3), is not subject to the requirements of the New Source Performance Standard, 326 IAC 12, (40 CFR 60.40c, Subpart Dc), because the boiler is less than ten million Btu per hour (MMBtu/hr).

(c) The two (2) natural gas fired boilers, (ID Nos. 1 and 2), are not subject to the requirements of the New Source Performance Standard, 326 IAC 12, (40 CFR 60.40c, Subpart Dc), because these boilers were constructed before June 9, 1989.

(d) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR art 63) applicable to this source.

State Rule Applicability - Entire Source

326 IAC 2-6 (Emission Reporting)

This source is subject to 326 IAC 2-6 (Emission Reporting), because it is located in Porter County and has the potential to emit more than ten (10) tons per year of NO_X. Pursuant to this rule, the owner/operator of the source must annually submit an emission statement for the source. The annual statement must be received by April 15 of each year and contain the minimum requirement as specified in 326 IAC 2-6-4. The submittal should cover the period defined in 326 IAC 2-6-2(8)(Emission Statement Operating Year).

326 IAC 5-1 (Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

326 IAC 2-3 (Emission Offset)

Pursuant to 326 IAC 2-3 (Emission Offset), this source is not considered a major source as defined by this rule because the source will limit its NO_X emissions to less than twenty-five (25) tons per year by a fuel usage limitation of 380 million cubic feet (MMCF) of gas per twelve (12) consecutive month period. Therefore, the Emission Offset rules, 326 IAC 2-3, will not apply.

State Rule Applicability - Individual Facilities

326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating)

The three (3) natural gas fired boilers (ID Nos. 1, 2 and 3), with a combined heat input capacity rating of 35.0 MMBtu per hour, are subject to the particulate matter limitations of 326 IAC 6-2-4. Pursuant to this rule, particulate emissions from indirect heating facilities constructed after September 21, 1983, shall be limited by the following equation:

$Pt = 1.09/Q^{0.26}$

where: Pt = maximum allowable particulate matter (PM) emitted per MMBtu heat input
Q = total source max. operation capacity rating = 35.0 MMBtu/hr

$Pt = 1.09/35.0^{0.26} = 0.432$ lbs PM/MMBtu

Therefore, the maximum allowable particulate matter (PM) is 0.432 lb/MMBtu which is equivalent to a PM emission rate of 5.79 lb/hr for boiler #1, 5.43 lb/hr for boiler #2, and 3.89 lb/hr for boiler #3.

326 IAC 6-3-2 (Process Operations)

Pursuant to 326 IAC 6-3-2(c) the PM from the manufacturing of iron oxide shall not exceed the pound per hour emission rate established as E in the following formula:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour and P = process weight rate in tons per hour

$E = 4.10\ (0.947)^{0.67} = 3.95$ lbs PM/hr

Based on the above equation, particulate matter emissions from the manufacturing of iron oxide shall be limited to 3.95 pounds per hour.

Compliance calculation:
(28.6 tons PM/yr) * (yr/8,760 hrs) * (2,000 lbs/ton) = 6.53 lbs PM/hr

Controlled Compliance calculation:
(0.29 tons PM/yr) * (yr/8,760 hrs) * (2,000 lbs/ton) = 0.07 lbs PM/hr

The baghouses, dust collectors, and scrubbers shall be in operation at all times the iron oxide manufacturing process is in operation, in order to comply with this limit.

326 IAC 8-9 (Volatile Organic Liquid Storage Vessels)

The two (2) 275 gallon fuel storage tanks, are subject to the record keeping and reporting requirements of 326 IAC 8-9-6 (a) and (b) because the source is located in Porter County and the storage tanks are each less than 39,000 gallons.

Air Toxic Emissions

Indiana presently requests applicants to provide information on emissions of the 188 hazardous air pollutants (HAPs) set out in the Clean Air Act Amendments of 1990. These pollutants are either carcinogenic or otherwise considered toxic and are commonly used by industries. They are listed as air toxics on the Office of Air Management (OAM) Construction Permit Application Form Y.

(a) This source will emit levels of air toxics less than those which constitute a major source according to Section 112 of the 1990 Clean Air Act Amendments.

(b) See attached calculations for detailed air toxic calculations.

Conclusion

The operation of this iron oxide manufacturing plant shall be subject to the conditions of the attached proposed New Source Construction and Minor Source Operating Permit 127-12157-00050.

Appendix A: Emission Calculations

Company Name: ISK Magnetics, Inc.
Address City IN Zip: 4901 Evans Avenue, Valparaiso, IN 46383
CP: 127-12157-00050
Plt ID: 127-00050
Reviewer: LQ/EVP
Date: May 18, 2000

Uncontrolled Potential Emissions (tons/year)

	Emissions Generating Activity			
Pollutant	Natural Gas Combustion	Diesel Fuel Internal Combustion	Iron Oxide Processing (PM emissions only)	**TOTAL**
PM	0.50	0.19	28.60	29.29
PM10	2.10	0.07	28.60	30.77
SO2	0.20	0.14	NA	0.34
NOx	27.10	5.25	NA	32.35
VOC	1.50	0.21	NA	1.71
CO	22.80	1.19	NA	23.99
total HAPs	0.00	0.00	NA	0.00
worst case single HAP	0.00	0.00	NA	0.00

Total emissions based on rated capacity at 8,760 hours/year.

Controlled Potential Emissions (tons/year)

	Emissions Generating Activity			
Pollutant	Natural Gas Combustion	Diesel Fuel Internal Combustion	Drying Kilns PM emissions	**TOTAL**
PM	0.40	0.19	0.29	0.88
PM10	1.40	0.07	0.29	1.76
SO2	0.10	0.14	NA	0.24
NOx	19.00	5.25	NA	24.25
VOC	1.00	0.21	NA	1.21
CO	16.00	1.19	NA	17.19
total HAPs	0.00	0.00	NA	0.00
worst case single HAP	0.00	0.00	NA	0.00

Total emissions based on rated capacity at 8,760 hours/year, after control.

Appendix A: Emissions Calculations
Particulate Matter Emissions from
Iron Oxide Production

Company Name:	**ISK Magnetics, Inc.**
Address City IN Zip:	**4901 Evans Avenue, Valparaiso, IN 46383**
CP:	**127-12157-00050**
Plant ID:	**127-00050**
Reviewer:	**LQ/EVP**
Date:	**May 18, 2000**

Maximum iron oxide powder production (based on 8760 hours) = 8,300 tons per year
Emission Factor = 6.9 lb/ton product produced

Potential PM-10:

$$\frac{(8{,}300 \text{ ton}) * (6.9 \text{ lb}) * (1 \text{ ton})}{\text{year} \quad \text{ton} \quad 2000\text{lb}} = 28.6 \text{ ton/yr}$$

Controlled PM-10:

28.6 * (1 - 99.0%) = 0.29 ton/yr

Note: Emission Factor from Factor Information Retrieval (FIRE) Data System version 6.22

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100

Company Name: **ISK Magnetics, Inc.**
Address City IN Zip: **4901 Evans Avenue, Valparaiso, IN 46383**
CP: **127-12157-00050**
Plt ID: **127-00050**
Reviewer: Linda Quigley/EVP
Date: May 26, 2000

Heat Input Capacity MMBtu/hr		Potential Throughput MMCF/yr
13.4	One small industrial boiler with a heat input capacity of 13.4 MMBtu/hr	117.3
12.6	One small industrial boiler with a heat input capacity of 12.6 MMBtu/hr	110.4
9.0	One small industrial boiler with a heat input capacity of 9.0 MMBtu/hr	78.8
7.2	Two Dryers, each with a heat input capacity of 3.6 MMBtu/hr	63.1
12.0	Two Calcination Kilns, each with a heat input capacity of 6.0 MMBtu/hr	105.1
4.0	Two Reduction Kilns, each with a heat input capacity of 2.0 MMBtu/hr	35.0
0.1	Two Flares, each with a heat input capacity of 0.05 MMBtu/hr	0.9
3.2	Two Oxidation Kilns, each with a heat input capacity of 1.6 MMBtu/hr	28.0
0.5	One H2 Reduction Kiln with a heat input capacity of 0.5 MMBtu/hr	4.4

					Fuel Usage Limit	
61.99		Pollutant		543.03	**380**	
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.5	2.1	0.2	27.2	1.5	22.8
Limited Potential to emit in tons/yr	**0.4**	**1.4**	**0.1**	**19.0**	**1.0**	**16.0**

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Limited Potential to emit (tons/yr) based on fuel usage limit of 380 MMCF/yr.

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100

HAPs Emissions

Company Name: **ISK Magnetics, Inc.**
Address City IN Zip: **4901 Evans Avenue, Valparaiso, IN 46383**
CP: **127-12157-00050**
Plt ID: **127-00050**
Reviewer: Linda Quigley/EVP
Date: May 26, 2000

HAPs - Organics

	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	5.702E-04	3.258E-04	2.036E-02	4.887E-01	9.232E-04

HAPs - Metals

	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	1.358E-04	2.987E-04	3.801E-04	1.032E-04	5.702E-04

Methodology is the same as page 1.

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A: Emission Calculations
Internal Combustion Engines - Diesel Fuel
Emergency Generator (>600 HP)

Company Name: **ISK Magnetice, Inc.**
Address City IN Zip: **4901 Evans Avenue, Valparaiso, IN 46383**
CP#: **127-12157-00050**
Plt ID: **127-00050**
Reviewer: **LQ/EVP**
Date: **May 18, 2000**

Emissions calculated based on output rating (hp)

S= 0.05 = WEIGHT % SULFUR

Power Output Horsepower (hp)	Potential Throughput hp-hr/yr
700.0	350000.0

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/hp-hr	0.0007	not provided	0.0004 *(.00809S)*	0.024 **see below	0.00071	0.00550
Potential Emission in tons/yr	0.123	0.000	0.071	4.200	0.123	0.963

**NOx emission factor: uncontrolled = 0.024 lb/hp-hr, controlled by ignition timing retard = 0.013 lb/hp-hr
Note that the PM10 emission factor in lb/hp-hr is not provided in the Supplement B update of AP-42.

Methodology

Potential Throughput (hp-hr/yr) = hp * 500 hr/yr
Emission Factors are from AP 42 (Supplement B 10/96)Table 3.4-1.
Emission (tons/yr) = [Potential Throughput (hp-/hr/yr) x Emission Factor (lb/hp-hr)] / (2,000 lb/ton)
PTE was calculated using 500 hours per year for emergency generator.

* No information was given regarding which method was used to determine the PM emission factor or whether condensable PM is included.

Appendix A: Emission Calculations
Internal Combustion Engines - Diesel Fuel
Emergency Fire Pump (<600 HP)

Company Name: ISK Magnetics, Inc.
Address City IN Zip: 4901 Evans Avenue, Valparaiso, IN 46383
CP#: 127-12157-00050
Plt ID: 127-00050
Reviewer: LQ/EVP
Date: May 18, 2000

Emissions calculated based on output rating (hp)

Power Output Horsepower (hp)	Potential Throughput hp-hr/yr
136.0	68000.0

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/hp-hr	0.0022	0.0022	0.0021	0.0310	0.0025	0.0067
Potential Emission in tons/yr	0.07	0.07	0.07	1.05	0.09	0.23

Methodology

Potential Throughput (hp-hr/yr) = hp * 500 hr/yr

Emission Factors are from AP42 (Supplement B 10/96), Table 3.3-2
Emission (tons/yr) = [Potential Throughput (hp-/hr/yr) x Emission Factor (lb/hp-hr)] / (2,000 lb/ton)

*PM emission factors are assumed to be equivalent to PM10 emission factors. No information was given regarding which method was used to determine the factor or the fraction of PM10 which is condensable.
PTE was calculated using 500 hours per year for emergency fire pump.

Appendix A: Emission Calculations
Internal Combustion Engines - Deisel Fuel
Emergency Generator and Fire Pump
HAP Calculations

Company Name: ISK Magnetics, Inc.
Address City IN Zip: 4901 Evans Avenue, Valparaiso, IN 46383
CP#: 127-12157-00050
Plt ID: 127-00050
Reviewer: LQ/EVP
Date: May 18, 2000

HAP	Emission Factor lb/MMBtu	Fuel usage MMBtu/hr	HAPs lb/hr	HAPs ton/yr
Benzene	0.000933	6.972	0.007	0.002
Toluene	0.000409	6.972	0.003	0.001
Xylene	0.000285	6.972	0.002	0.000
1,3 Butadiene	0.000039	6.972	0.000	0.000
Formaldehyde	0.000118	6.972	0.001	0.000
Acetaldehyde	0.000077	6.972	0.001	0.000
Acrolein	9.000000E-06	6.972	0.000	0.000
Total PAH	0.000017	6.972	0.000	0.000

Total HAPs = 0.013

Methodology

Emission factors are from AP42, Table 3.3-2
Emission (tons/yr) = [Emission factor (lb/MMBTu) * Fuel usage (MMBtu/hr) * (500 hr/yr) / (2000 lb/ton)]

Note: For simplicity of calculations, the fire pump and generator have been combined for a horse power of 836 and fuel usage of 6.972 MMBtu/hr
AP42, Table 3.3-2 was used for emission factors even though the combined hp was higher than 600. These emission factors represent the worst case emissions.